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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,374	01/22/2002	Walter Demuth	076776-0121	6987

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT PAPER NUMBER

3726

DATE MAILED: 08/11/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

8C

Office Action Summary

Application No.

10/051,374

Applicant(s)

DEMUTH ET AL.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 13, 15-17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 14 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The corrected or substitute drawings were received on 6/13/02. These drawings are approved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 13, 15-17, 19, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann et al. (5,737,952) in view of Hada et al. (6,098,441) and Damsohn et al. (5,743,329).

Baumann et al. teach a method of forming at least one flat-tube insertion slot **29** in a heat exchanger header tube **5** suitable for use in an air-conditioning system, comprising: configuring the flat-tube insertion slot **29** by punching with a slot punch **10**, the slot punch **10** to

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thereby form a rimmed insertion slot **29** having a rim on at least a portion of its periphery extending into the interior of the header tube **5**.

Baumann et al. teach the invention cited above with the exception of making a sawcut in the header tube and punching into the region of the sawcut with the slot punch **10**. Baumann et al. also do not teach cutting to a depth which is less than the wall thickness of the tube or cutting in a direction transverse to the axis of the tube as recited in claims 2 and 4 or the cutting being substantially linear and has a first length and first width as recited in claims 13 and 17.

Hada et al. teach making a cut **2** in a tube **1** (fig. 1 and col. 3, lines 24-27) and then punching into the region of the cut **2** with a slot punch **7** to create a rim **5** which extends into the interior of the tube **1**. Hada et al. also teach cutting to a depth which is less than the wall thickness of the tube **2, 3** (fig. 1), the cut **2,3** is made in a direction transverse to the axis of the tube, and the cut is substantially linear and has a first length and first width.

Damsohn et al. teach that it is known to cut a pipe with a sawcut (col. 3, lines 2-3).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Baumann et al. with the steps of making a cut in the header tube and then punching into the region of the cut with a slot punch, cutting to a depth which is less than the wall thickness of the tube, cutting on a direction transverse to the axis of the tube, and wherein the cut is substantially linear and has a first length and first width, in light of the teachings of Hada et al., in order to reduce the shear droop of the formed rim as suggested by Hada et al. at col. 1, lines 40-44.

Although Hada et al. teach that the cutting is performed by press-cutting, round-cutting, or cutting or grinding with a tool, Hada et al. do not explicitly teach that the cutting is by the claimed "sawcut".

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Baumann et al./Hada et al. with a sawcut, in light of the teachings of Hada et al., in order to utilize a cutting technique that accurately and symmetrically forms the desired cut.

Regarding claim 3, Baumann et al./Hada et al./Damsohn et al. teach the invention cited with the exception of the sawcut being made in a direction parallel to the axis of the header tube.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have made the sawcut parallel to the axis because applicant has not disclosed that a parallel cut provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicants invention to perform equally well with either the transverse sawcut of the prior art (and as claimed in applicant's claim 4) or the claimed parallel sawcut, because both sawcuts perform the same function of providing attachments for heat exchange tubes.

Regarding claim 15 and 19, Baumann et al. teach that the header tube has a comparatively thick wall thickness 5.

Regarding claims 16 and 20, it is inherent that a saw blade has a predetermined diameter and width.

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5. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Damsohn et al. in view of Baumann et al.

Damsohn et al. teach making a sawcut **3** (fig. 11b and col. 7, lines 7-8) in a header tube, and configuring the flat-tube insertion slot **3** by punching into the region of the sawcut **3** with a slot punch **31**.

Damsohn et al. teach the invention cited above with the exception of the sawcut being introduced to a depth which is less than the wall thickness of the header tube.

Baumann et al. teach cutting to a depth which is less than the thickness of the tube (col. 3, lines 24-27 and **2,3** fig. 1).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Damsohn et al. with a sawcut introduced to a depth which is less than the wall thickness of the header tube, in light of the teachings of Baumann et al., in order to help reduce the amount of chips that may go into the pipe as suggested by Baumann et al. at col. 1, lines 35-39.

Allowable Subject Matter

6. **Claims 5, 6, 14, and 18** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. **Claims 8-12** are allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 1-4, 7, 13, 15-17, 19, and 20 have been considered but are moot in view of the new ground(s) of this non-final rejection.

Contact Information

9. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line	1-800-786-9199
Internet PTO-Home Page	http://www.uspto.gov/



Marc Jimenez
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MJ

August 7, 2003